

# MC800

Helsinki (FI) HYPERCONNECTIONS



Understanding that nature is technological, and that it develops in the context of mystery. The architectural system is based on reproducing functional logical processes observed in natural elements. In nature we find organisms that flow in a similar way, and that share the same archetype. These patterns can be found at all scales that we know or can observe.

The place is recognized by knowing the history that emanates from it, the aim is to act in continuity with its history, constructing a new reality but incorporating the genetic code of the place, whether it be its traces of mobility, historical constructions, landscape or environmental elements, or any relational element. The architecture is based on reproducing functional logical processes of natural elements. A system is proposed that is capable of developing and evolving on the basis of local geographical conditions, creating an irregular grid on which the architecture that is in the spaces of the islands and in turn in the archipelago emerges. The system is generated on the basis of networked growth rules. The architecture is intended to be recognizable and to connect the geography, history and culture of the place through a universal response, all this is developed with short, medium and long term strategies.

This system follows a natural order that emerges from the nature of things, from its basic principles following patterns with a strategy capable of interpreting the values of the site. The system operates in a global environment and is open to transformation and evolution, it seeks interaction through a simple system that responds to social, technological and cultural conditions. It takes into account both the physical aspects of the territory and the landscape elements that compose it, as well as the social relations of the living beings themselves. The network is an elementary system that with variations can generate unpredictable situations for those who walk through it, it is a space of being and walking that is based on movement and pause.

In the city several systems intermingle, we live in a world that is between the digital and the physical, with relational structures that interact and create more complex, powerful and evolving systems centred on the interconnection of all things and in a certain way because we need each other. The idea of the network is to spread and maintain ecosystems, understanding life as the interconnection of all ways of existing and flowing within a molecular matrix that we share, we are part of the energies that flow through nature.

## TERRITORIAL

### GREEN AND RECREATIONAL NETWORK



### THE GREEN FINGERS AND THE BLUEPALM

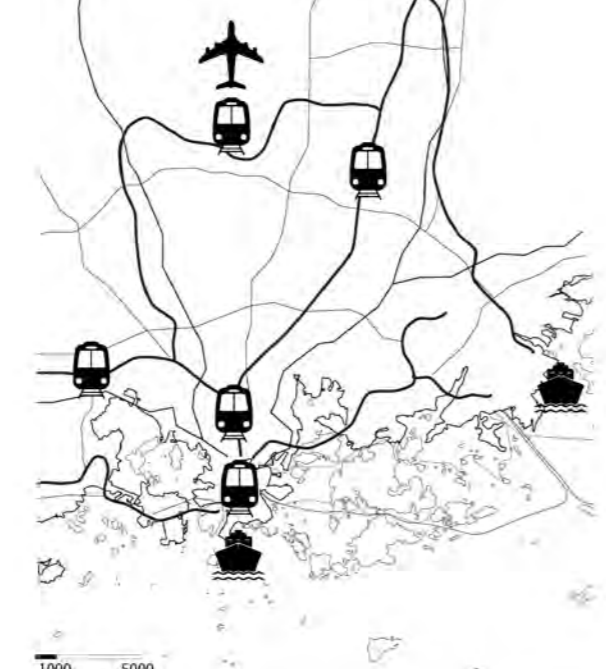


### MAIN SHORE ROUTE AND GREEN FINGERS

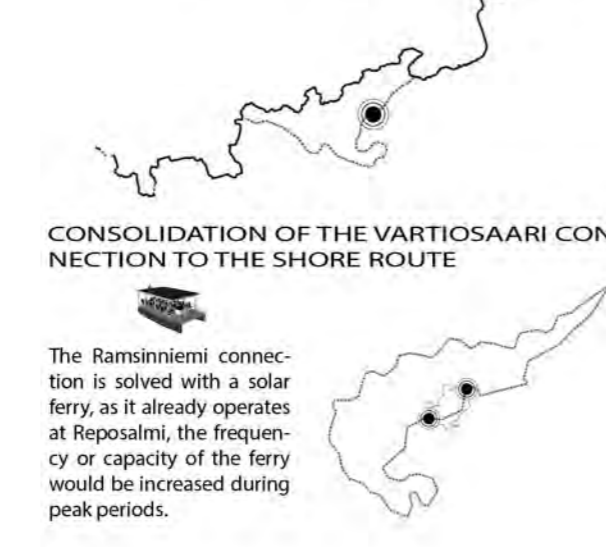


In Helsinki it is all about connections, the conditions of the city are favourable for its green network which is structured like a hand, consisting of six green fingers spread over the city and the blue palm in the archipelago, the increase of recreational services will make these areas more active and in the case of the eastern archipelago the connections between the pilot sites and the city are defined. Based on this structure the interaction of the city with the archipelago is consolidated, the connections depend on the functioning of many networks in overlapping layers, where different processes occur at the same time, resulting in an organised complexity, they function by means of interrelated distribution networks and at different scales, from a motorway to a pedestrian path. The smaller scale structures are those that ensure the human vitality of the city, they are hierarchically organised, the connections require that components of different sizes fit seamlessly into the whole. The pieces of the urban network are simple, and interact in a straightforward way; yet their linkage is complex.

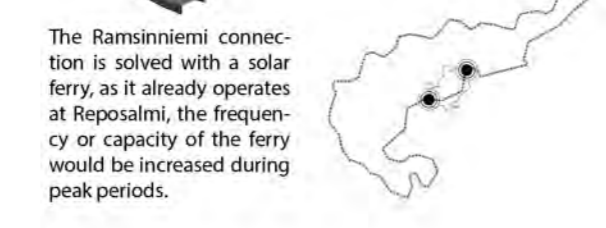
### MAIN NETWORKS AND TERMINALS



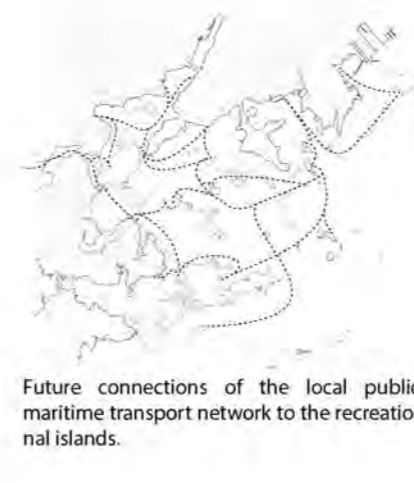
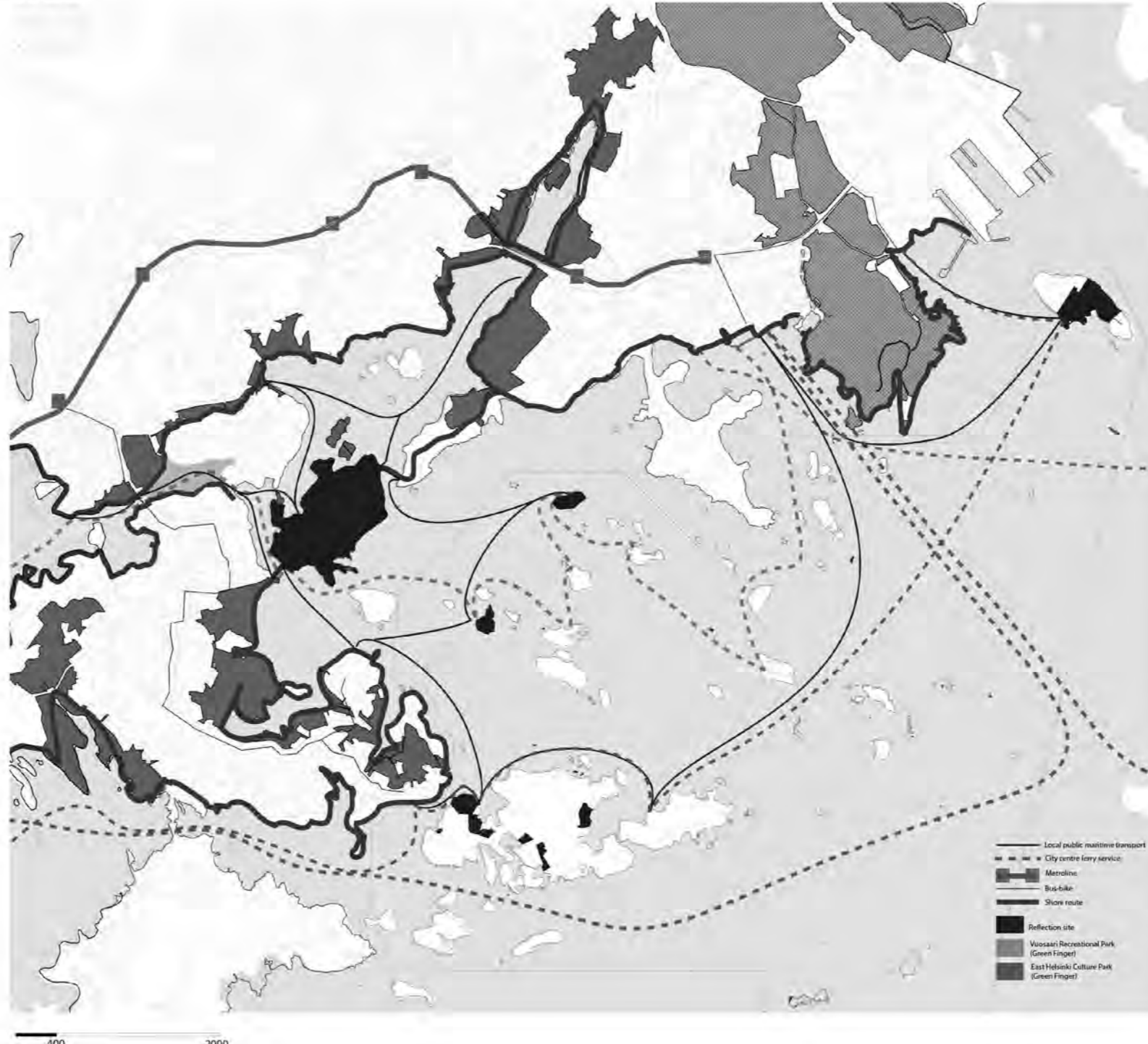
### FUTURE VARTIOSAARI-CITY CENTRE CONNECTION



### CONSOLIDATION OF THE VARTIOSAARI CONNECTION TO THE SHORE ROUTE



## LOCAL



## TEMPORARY

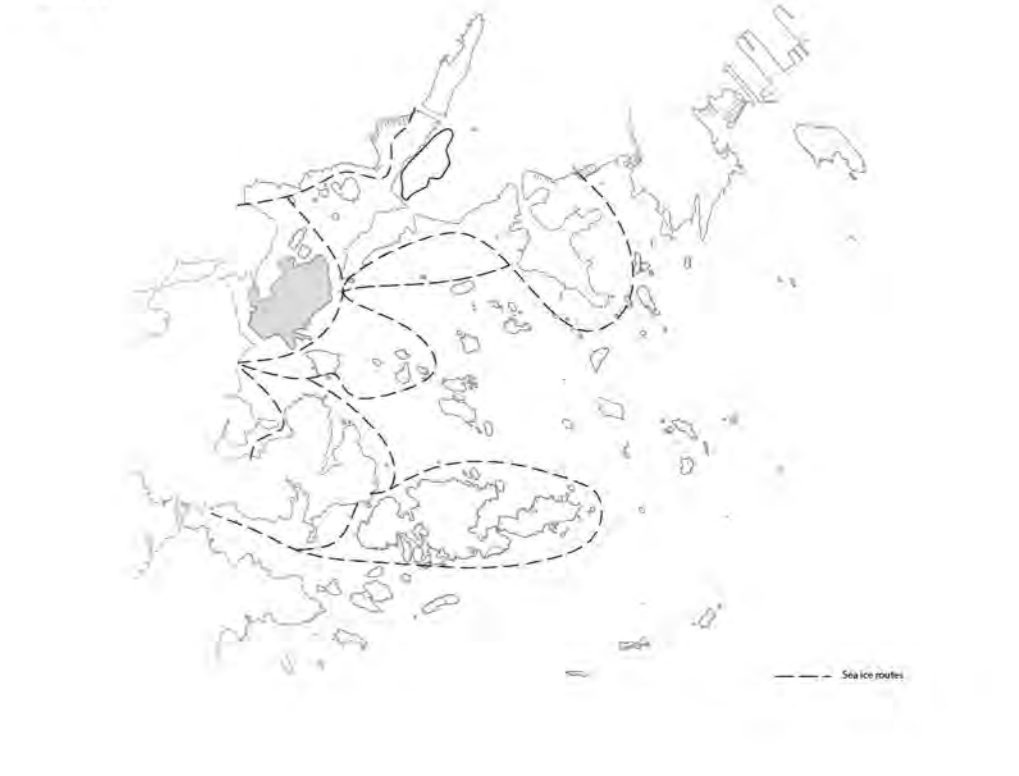
The seasons establish rhythms in the archipelago and in the holiday seasons, so that their intensity of use would vary depending on the weather conditions.

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC

### SUMMER

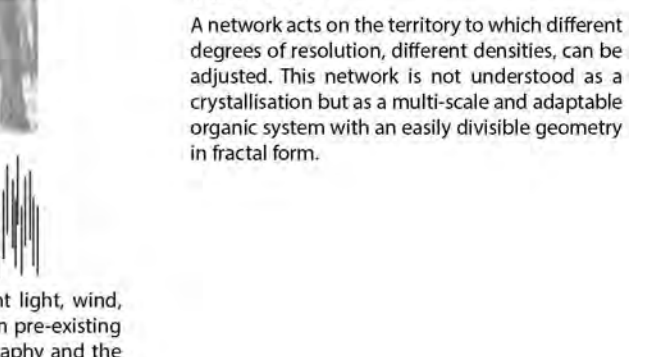
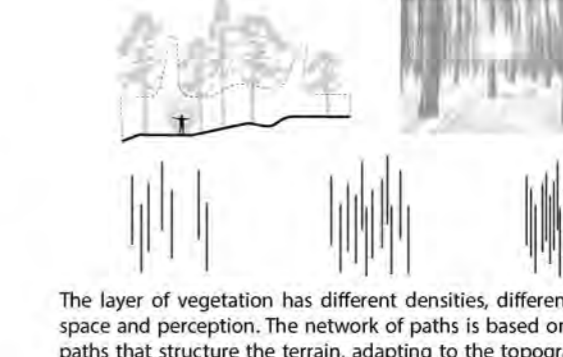
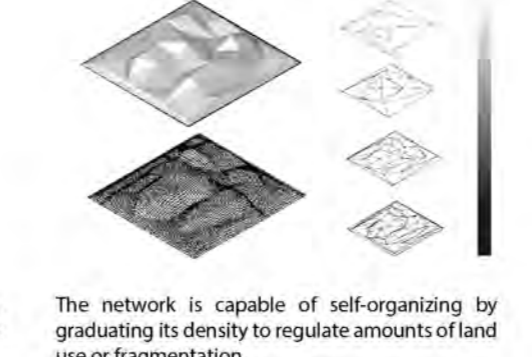
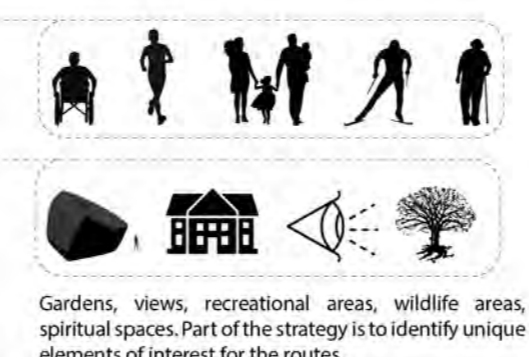
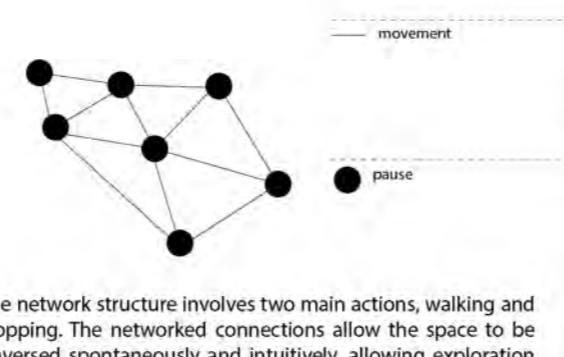
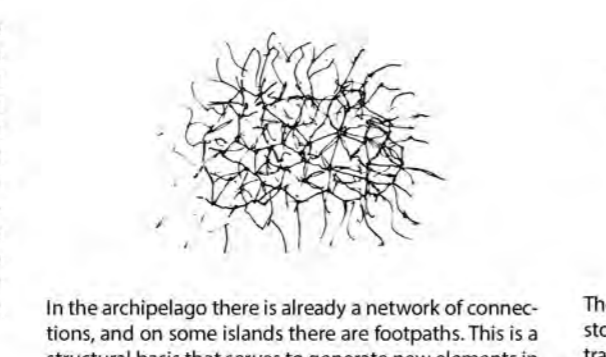


### WINTER



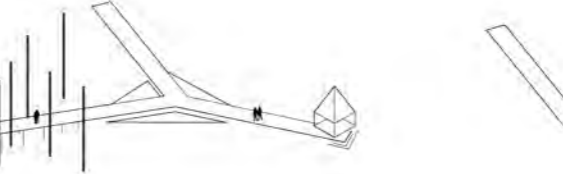
## ACTION STRATEGY

The system acts and adapts to a specific geographical environment, understanding how the physical elements are related to discover the rules and geometry, thus a structural system is found that allows the development of the project on various scales, the network is a tactical strategy that arranges with a natural and coherent logic the geography and the biological settlements that inhabit the place, this system simultaneously defines its structural principles as well as the regulation of flows and new centralities or accumulations and responds to the properties of the place, the architecture interacts with the place based on its own essential rules and recognizes the different systems on which to act. It uses geographical parameters and pre-existences as a reference, taking into account the phenomena that affect it such as flows, interactions and cycles. The network seeks connection with the potentials of place and values. The system learns from nature incorporating principles and values from environmental processes and cycles, from the logic of natural ecosystems and from the anatomy or physiology of living beings.



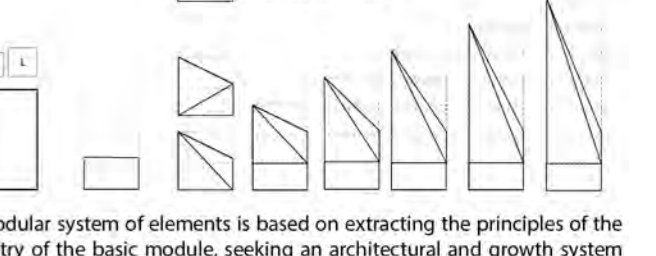
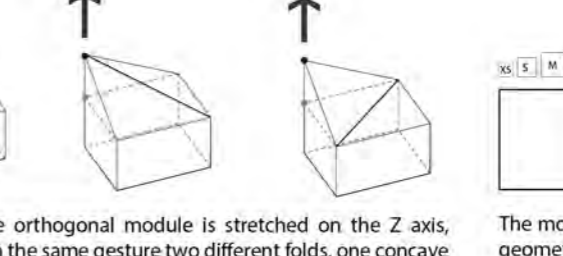
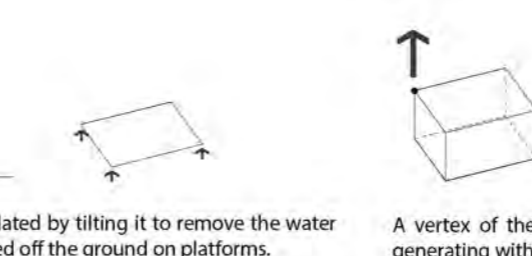
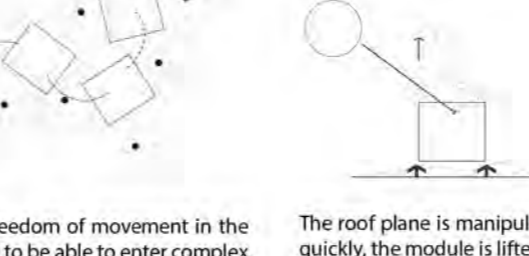
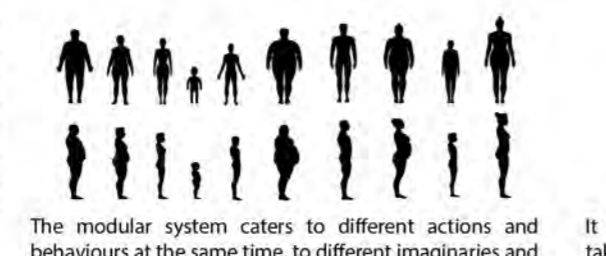
## HUBS, ENCOUNTERS AND ARTICULATIONS

In the multi-scalar process, specific actions are defined on the basis of functional and material principles of the global structure. Hubs can grow from hosting different activities grouped in a specific area, their rules are related to the movement of people, the existence of geographical features, the presence of architectural elements or others. Nature needs artificial structures that are conditioned for the enjoyment and accessibility of nature. At the meetings and changes of direction, activities of lesser impact can be concentrated.



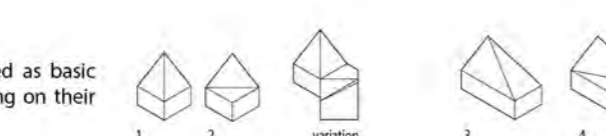
## STUDY OF THE GEOMETRIC SPATIAL MODULE

The design is a family of elements that are simultaneously similar in their physiological and geometrical characteristics. The geometric characteristics are derived from a single gesture that manipulates a flat surface that can be a floor or a roof. This gesture is that of stretching a vertex on the z-axis to modify and slope the horizontal plane, generating relations of two folds, one concave and one convex, which define the properties that allow their formal variability and establish a series of basic geometric principles that define the essence of the elements. With the variations the objects share common characteristics but the result is always different. In some cases new conditions appear that modify them but do not change their basic characteristics.



## METABOLISM AND ADAPTATION

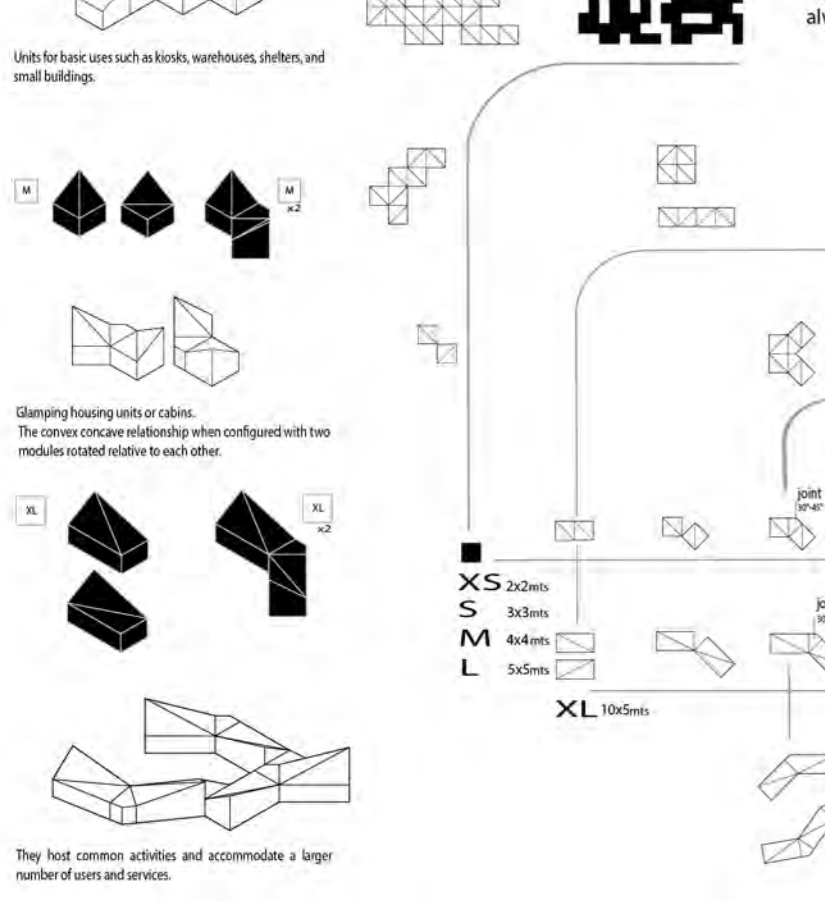
For the modular system, four modules are considered as basic units, which in turn generate two variations depending on their configuration and the ratio of concave to convex.



With two rotated modules, a complex volumetry is obtained whose spatial management is based on the adaptation to the forest and the topography. When the modules are arranged in a certain way, they form a complex upper particle that will behave in the same way in terms of aggregation and volumetric composition in relation to the method of adding one of the modules, in this case broken modules generated by the sum of two basic modules. For the broken modules, two rotation angles of 30° and 45° are established, this generates a second order of pieces that function as an articulation.

In a first stage the aggregations are simple and regular, and move on an orthogonal grid. The growth is simple but can be made more complex by handling frequencies of binary, ternary and quaternary combinations of the basic module.

Growth is about the relationship of the whole and the fragment, the repetition and variation of the same element and its relationships. The rules of growth leave the way always open to units that are larger or smaller but similar to them.



## ELEMENTS

